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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,758	12/23/2005	Joachim Antonissen	09997.0124USWO	6616
23552	7590	07/07/2009		
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			EXAMINER YANG, JIE	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 07/07/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/539,758

Applicant(s)

ANTONISSEN ET AL.

Examiner

JIE YANG

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2009.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
4a) Of the above claim(s) 9-19 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 and 20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) 21-31 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/CDC)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/30/2009 has been entered.

Status of the Claims

Claim 1 has been amended; claims 9-19 are withdrawn as non-elected claims; claims 20-31 are added as new claims; and claims 1-8 and 20-31 remain for examination.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-8 and 20 are drawn to a steel composition.
- II. Claims 21-31 are drawn to an uncoated, electro-galvanized or hot dip galvanized TRIP steel product.

Inventions II and I are related as combination and subcombination. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: they lack the same unity a posteriori because the common feature of "steel composition with specifically

range as recited in the claim 1" is known in the art. Yokoi et al (US 6,589,369, thereafter US'369) discloses a steel with composition ranges overlapping the composition ranges as recited in the instant invention. Invention I-II lacks the same or corresponding special technical feature. Therefore unity of invention is lacking and restriction is appropriate.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Because Applicant has elected group I for examination, therefore, the additional Group II, claims 21-31 are withdrawn from further consideration as non-elected claims.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if

any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the instant case, the percentage of microstructure phases has no proper unit, it is not clear the percentages of phases are in "wt.%" , or "vol.%". For examination purpose, the percentage of the phase is assumed in vol.%. Proper corrections are needed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 and 20 are rejected under 35 U.S.C. 103(a) as being obvious over Yokoi et al (US 6,589,369, thereafter US'369).

Regarding claim 1, US'369 teaches high fatigue strength steel (Title, abstract of US'369) for cold rolling application (Col.4, line 59 to Col.5, line 3 and claims 10, 13, and 17 of US'369). The composition comparison between the alloy of US'369 and the instant application is listed in the following table. All of the compositions disclosed by US'369 overlap the composition of the instant claims, which is a prima facie case of obviousness. SEE MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the compositions of C, Mn, Al, Si, P, S, and optionally adding N, Ti, Nb, V, B, and balance with Fe as claimed in the instant claim because US'369 discloses the same utility throughout the disclosed ranges.

US'369 teaches the microstructure of US'369's alloy having ferrite as the main phase and controlling forming retained

austenite, bainite and martensite phases (tables 2, 4 and Col.13, line 49 to Col.14, line 14 of US'369). The different portions of phases taught by US'369, for example samples C-1 to C-6 in table 2 and samples A-1 to A-9 in table 4 of US'369 overlap the claimed 30-75Vol% ferrite, 10-40Vol% bainite, 0-20Vol% retained austenite, and 0-10Vol% Martensite as recited in the instant claim.

Element	From instant Claim 1 (in wt%)	US'369(in wt%)	Overlapping range (in wt%)
C	0.13-0.26	0.01-0.3	0.13-0.26
Mn	1-2.2	0.05-3	1-2.2
Al	0.8-1.5	0.005-1	0.8-1
Si	0.2-0.6	0.01-2	0.2-0.6
P	0.04-0.1	≤ 0.1	0.04-0.1
S	≤ 0.012	≤ 0.01	≤ 0.01
N	≤ 0.02	Trace amount	Trace amount
Ti	≤ 0.1	Optional: 0.05-0.5	0.05-0.1
Nb	≤ 0.1	Optional: 0.01-0.5	0.01-0.1
V	≤ 0.1	Optional: 0.02-0.2	0.02-0.1
B	≤ 0.001	0.0002-0.002	0.0002-0.001
Fe	Balance	Balance	Balance

Regarding claims 2-8, US'369 teaches carbon composition from 0.01 to 0.3wt%, which overlaps 0.13-0.19wt% C (claim 2); 0.135-0.19wt% C (claim 3); 0.14-0.19wt% C (claim 4); 0.17-0.23wt% C (claim 5); 0.20-0.26wt% C (claim 6). The composition ranges taught by US'369 also overlap all the composition ranges as recited in the instant claim 7. US'369 teaches adding 0.005

to 1wt% Al, which overlaps the 0.9 to 1.3wt%Al as recited in the instant claim 8.

Regarding claim 20, the limitation of uncoated, electro-galvanized or hot dip galvanized are recognized as intended uses for the cold rolled steel sheet, which does not add patentable weight for the instant alloy composition claims. MPEP 2111.02 II.

Response to Arguments

Applicant's arguments see "applicant arguments/remarks", filed on 4/30/2009, with respect to objection to the rejections for claims 1- 8 have been fully considered and are not persuasive. Regarding the arguments related to the amended features, the Examiner's position is stated as above.

Applicant's arguments: regarding Yokoi et al (US'369), it does not teach Al and Si levels as recited in the instant claims and teach away adding P. In response, as shown in the comparison table between the alloy of US'369 and instant invention, the ranges of Al, Si, and P of US'369's alloy overlap the composition ranges as recited in the instant claim, which is a prima facie case of obviousness. SEE MPEP 2144.05 I.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Roy King/
Supervisory Patent Examiner, Art Unit 1793